

Applic. No. 09/894,674

Amdt. dated May 18, 2005

Reply to Office action of February 18, 2005

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-16 are now in the application. Claims 9, 13, and 14 have been amended. Claim 16 has been added. Support for added claim 16 can be found in Fig. 1 and on page 13, lines 15-20 of the specification. No new matter has been added.

In the first paragraph on page 2 of the above-identified Office action, claim 9 has been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner stated that it is unclear what "taking over the nominal distance" means. Claim 9 has been amended so as to further clarify the claim. Therefore, the rejection of claim 9 is believed to have been overcome.

In the second paragraph on page 2 of the above-identified Office action, claim 13 has been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner stated that there is insufficient antecedent basis for the limitation of "said third and said fourth optical sensors" in the claim. The

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claims have been amended so as to facilitate prosecution of the application and claim 13 is now dependent on claim 16. Therefore, the rejection is believed to have been overcome.

In the third paragraph on page 2 of the above-identified Office action, claim 14 has been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner has stated that there is insufficient antecedent basis for the limitation of "said third optical" on page 29. Claim 14 has been amended so as to facilitate prosecution of the application and claim 13 is now dependent on claim 16. Therefore, the rejection is believed to have been overcome.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, first and second paragraphs. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic or clarificatory reasons. The changes are not provided for overcoming the prior art nor for any reason related to the statutory requirements for a patent.

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In the last paragraph on page 2 of the Office action, claims 1-3 have been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi et al. (U.S. Patent No. 4,965,597) (hereinafter "Ohigashi") under 35 U.S.C. § 103.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*:

acquiring, by a first optical sensor, a mark disposed on the piece of printed material; acquiring, by a second optical sensor, an edge of the piece of printed material; and calculating, by an evaluation unit, a spaced distance of the mark from the edge.

It is noted that the corporate assignee of the Loeffler reference is also the assignee of the instant application,

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therefore applicants are very familiar with the Loeffler reference.

Applicant discussed the pertinence of the disclosure of the priority application of the Loeffler reference in the specification of the instant application. It is stated in the specification of the instant application that it is disadvantageous to detect signals for the edge of the sheet and the image formation using only one sensor. The disadvantages are that two sensitivities are required, one for the edge of the sheet and one for the image. The present invention solves this problem by using a sensor for sensing the edge of the sheet and a sensor for the image. Furthermore, the present invention allows a simultaneous detection of the edge of the sheet and the image, which is not possible in Loeffler.

The Ohigashi reference discloses a sensor for register marks and a further sensor for the edge of a web. The register marks and the web edge of Ohigashi are related to each other, which means that the web edge can be regulated without having to determine the distance to the register mark. Ohigashi discloses that the signal according to Fig. 8a shows a trigger signal, which is not related to the register marks. Therefore, a person of ordinary skill in the art does not have

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any motivation to modify the teaching of Loeffler with the teaching of Ohigashi.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

As seen from the comments provided above, the references do not show or suggest acquiring, by a first optical sensor, a mark disposed on the piece of printed material; acquiring, by a second optical sensor, an edge of the piece of printed material; and calculating, by an evaluation unit, a spaced distance of the mark from the edge, as recited in claim 1 of the instant application.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Furthermore, a critical step in analyzing the patentability of claims pursuant to 35 U.S.C. § 103 is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.

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Cir. 1999). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." Id. (quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 163.5, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of

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ordinary skill in the art, or, in some cases the nature of the problem to be solved. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein). Whether the examiner relies on an express or an implicit showing, the examiner must provide particular findings related thereto. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence." Id. When an examiner relies on general knowledge to negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F.3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002).

Upon evaluation of the examiner's comments, it is respectfully believed that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness

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with respect to the claims. Accordingly, the examiner is requested to withdraw the rejection.

Since claim 1 is believed to be allowable, dependent claims 2 and 3 are believed to be allowable as well.

In the third paragraph on page 5 of the Office action, claim 4 has been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,965,597) and further in view of Foote et al. (U.S. Patent No. 6,008,826) (hereinafter "Foote") under 35 U.S.C. § 103. Foote does not make up for the deficiencies of Loeffler and Ohigashi. Since claim 1 is believed to be allowable, dependent claim 4 is believed to be allowable as well.

In the penultimate paragraph on page 6 of the Office action, claim 5 has been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,965,597) and further in view of Wantanabe et al. (U.S. Patent No. 6,128,106) (hereinafter "Wantanabe") under 35 U.S.C. § 103. Wantanabe does not make up for the deficiencies of Loeffler and Ohigashi. Since claim 1 is believed to be allowable, dependent claim 5 is believed to be allowable as well.

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Even though claim 5 is believed to be allowable, the following remarks pertain to Wantanabe. Wantanabe pertains to the detection of the velocity of a pulled-in document. The detection of velocity is required because a precise scanning of the image information occurs. Detection on both sides of the document makes it possible to determine the slant of the document. Wantanabe discloses monitoring whether the rolls show any signs of wear and tear. The device disclosed by Wantanabe is completely different than the present invention. A person of ordinary skill in the art does not have any motivation to combine the teachings of Wantanabe and Loeffler.

In the third paragraph on page 7 of the Office action, claim 6 has been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,965,597) and further in view of deJong et al. (U.S. Patent No. 5,510,877) (hereinafter "deJong") under 35 U.S.C. § 103. deJong does not make up for the deficiencies of Loeffler and Ohigashi. Since claim 1 is believed to be allowable, dependent claim 6 is believed to be allowable as well.

Even though claim 6 is believed to be allowable, the following remarks pertain to the deJong reference. The deJong reference discloses detecting the velocity of a conveyor belt so that the image information scanned in by a scanner does not result

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in distortion. Fig. 1 shows that the course of the velocity is represented by a rotation. The further detectors also detect the lateral position of the conveyor belt, similarly to the Foote reference, and are not related to the forward movement of the belt. A person of ordinary skill in the art does not have any motivation to combine the teaching of deJong with the teaching of Loeffler.

In the first paragraph on page 8 of the Office action, claims 10, 12, 13, and 14 have been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,695,597) and Foote (U.S. Patent No. 6,008,826) under 35 U.S.C. § 103.

Claim 10 calls for, *inter alia*:

a first optical sensor for acquiring a mark disposed on the piece of printing material, a second optical sensor for acquiring an edge of the piece of printing material, an acquisition unit for determining the velocity of the piece of printing material, and an evaluation unit for calculating a spaced distance between the mark and the edge from the chronological spacing between acquiring the edge and acquiring the mark.

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Foote discloses a completely different system. Foote discloses that marks on a circulating belt are detected. The marks are partially covered by transported sheets. Using the partially covered marks, the evaluation device receives information to determine the distance between sheets. The slant of the sheet can be determined via the detectors on both sides of the belt. A person of ordinary skill in the art does not have motivation to use the teaching of Foote to modify Loeffler.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

As seen from the comments provided above with regard to claim 1 and the remarks pertaining to Foote, the references do not show or suggest a first optical sensor for acquiring a mark disposed on the piece of printing material, a second optical sensor for acquiring an edge of the piece of printing material, an acquisition unit for determining the velocity of the piece of printing material, and an evaluation unit for calculating a spaced distance between the mark and the edge from the chronological spacing between acquiring the edge and acquiring the mark, as recited in claim 10 of the instant application.

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The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Furthermore, the remarks pertaining to claim 1 above with regard to the critical step in analyzing the patentability of claims pursuant to 35 U.S.C. § 103, being casting the mind back to the time of invention, also pertain to claim 10 and are incorporated in their entirety here with respect to claim 10.

Upon evaluation of the examiner's comments, it is respectfully believed that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims. Accordingly, the examiner is requested to withdraw the rejection.

Since claim 10 is believed to be allowable, dependent claims 12, 13, and 14 are believed to be allowable as well.

In the first paragraph on page 11 of the Office action, claim 11 been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,695,597) and further in view of Foote (U.S. Patent No.

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6,008,826) and further in view of deJong (U.S. Patent No. 5,510,877) under 35 U.S.C. § 103. deJong does not make up for the deficiencies of Loeffler and Ohigashi. Since claim 10 is believed to be allowable, dependent claim 11 is believed to be allowable as well.

In the fifth paragraph on page 11 of the Office action, claim 15 been rejected as being obvious over Loeffler (U.S. Patent No. 6,429,945 B1) in view of Ohigashi (U.S. Patent No. 4,965,597) and Foote (U.S. Patent No. 6,008,826) and further in view of Wantanabe (U.S. Patent No. 6,128,106) under 35 U.S.C. § 103. Wantanabe does not make up for the deficiencies of Loeffler and Ohigashi. Since claim 10 is believed to be allowable, dependent claim 15 is believed to be allowable as well.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 10. Claims 1 and 10 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 1 or 10, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-16 are solicited.

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In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner & Greenberg P.A., No. 12-1099.

Respectfully submitted,



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